



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
---------------	-------------	----------------------	---------------------

08/135,059 10/12/93 SEEBACHER

R 233808419

EXAMINER

PITTS, A

ART UNIT

PAPER NUMBER

35M1/0709

DARBY & DARBY
805 THIRD AVENUE
NEW YORK, NY 10022

3502

DATE MAILED:

07/09/96

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 4-15-96 ☒ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), — days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-70 are pending in the application.

Of the above, claims 20, 23, 28, 31-35 and 48-68 are withdrawn from consideration.

2. ☐ Claims have been cancelled.

3. ☒ Claims 36-47 are allowed.

4. ☒ Claims 1-19, 21, 22, 24-27, 29, 30, 69 & 70 are rejected.

5. ☐ Claims are objected to.

6. ☐ Claims are subject to restriction or election requirement.

7. ☐ This application has been filed with Informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on . Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on , has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed , has been ☐ approved; ☐ disapproved (see explanation).

12. ☒ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☒ been received ☐ not been received ☐ been filed in parent application, serial no. ; filed on .

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

Art Unit: 3502

Part III DETAILED ACTION

This is a fourth Office action, Final, in response to applicant's amendment and remarks filed April 15, 1996.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 C.F.R. § 1.75(d)(1) and M.P.E.P. § 608.01(I). Correction of the following is required: there is no discussion of a "Fottinger coupling" as set forth in claim 3.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-8, 18, 19, 21, 22, 24-27, 29, 30, 69 and 70 are rejected under 35 U.S.C. § 102(b) as being anticipated by Japanese Patent 54-145860.

The Japanese Patent '860 discloses a torque converter with a bypass clutch including all of the elements as set forth in applicant's claims. Please note the

Art Unit: 3502

housing 6 connected with a rotary driving device (shaft) 1, 2; a carrier (hub) 26 connected to the runner 10 by a weld for rotating therewith contains stressing means 27, 28 and a confining portion 24 radially outwardly adjacent the energy storing element; a runner 10 disposed in the housing and connected to a rotary driven device (shaft) 13 via hub 12; a torsionally elastic damper means 25 for transmitting power between the housing 6 and the driven device 13, wherein the torsion elastic means includes at least one energy storing device acting in a circumferential direction of the impeller 8 between the runner 10 and the driven device 13 via hub 12 and piston 15 and the energy storing device is spaced apart from and disposed radially outwardly of the axis of rotation X-X. The Japanese Patent also includes a guide wheel 11; said driving device 1 which includes an output element 2 of an engine; said driven device 13 which includes an input element of a transmission; and said housing which includes a wall 6 adjacent the driving device 2, wherein the power transmitting device is disposed between the wall and the runner 10. The damper includes an output member (piston) 15 which is axially movable and an output element 21 arranged to transmit torque to the driven device 13 which is nonrotatably connected with an output member.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3502

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

Claims 9 and 10 are rejected under 35 U.S.C. § 103 as being unpatentable over Japanese Patent 54-145860.

The Japanese Patent discloses all of the limitations as set forth in applicant's claims as noted in the rejection under 35 USC 102(b) except there is no indication of the spring gradient of the preformed curved springs 20. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to determine the optimum range of the spring gradient, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the

Art Unit: 3502

optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Claims 11-17 and 23-25 are rejected under 35 U.S.C. § 103 as being unpatentable over Japanese Patent 54-145860 in view of Friedmann et al. 5,377,796.

The Japanese Patent does not disclose the wear resistance member or a torsion damping spring preformed in a curved shaped wherein the springs extend along an arc between 75° and 175°.

However, Friedmann et al. discloses the wear resistance member 23 and the torsion damping spring 20 which is preformed into a curved shape and extends along an arc between 90° and 175°.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to apply Friedmann et al.'s teaching of the damping spring to the Japanese Patented invention for providing a damper with enhanced energy storing capabilities.

Allowable Subject Matter

Claims 36-47 are allowable over the prior art of record.

The following is an Examiner's statement of reasons for the indication of allowable subject matter: the prior art of record does not reveal or render obvious a

Art Unit: 3502

power transmitting apparatus having all of the elements as set forth in the independent claim specifically including the combination of the stressing means for stressing the elastic damper which is connected with a runner for joint movement about and along the axis, wherein the runner is connected with a rotary driven device and is movable relative to the output element in the direction of the axis.

Response to Amendment

Applicants' arguments filed 4-15-96 have been fully considered but they are not deemed to be fully persuasive.

First, Applicants contend that the examiner's interpretation of the Japanese Patent is incorrect. Specifically, the stressing members in the Japanese Patent are not welded to the runner for rotation therewith and, therefore, the stressing members do not form part of the carrier of the hub.

The Examiner disagrees, in part. It appears that Applicants have read the rejection incorrectly. It is the carrier 26 that is welded to the runner. The rejection has been rewritten to clearly reflect the Examiner's position. Furthermore, the stressing members 27 and 28 are connected to the carrier by pin 31, thus the members 27 and 28 do form part of the hub 26.

Applicants further contend that the Examiner made an incorrect statement in the arguments noted in the last paragraph of page 8 of paper no. 11.

Art Unit: 3502

The Examiner agrees with Applicants. The statement should read as follows:

Toyota shows a spring 25 attached to the runner 10 such that, when locked up, the spring is connected to the runner 10 and the housing 6 which is attached to the driving device (the engine) 1, 2. The spring must be attached to the driving device when the bypass clutch is in the locked up state in order for the driving device to drive the driven member with a 1:1 ratio, i.e., bypassing the variable torque output of the impeller and turbine.

Applicants' further contend that the springs 25 in the Japanese Patent cannot act in the power flow between the runner 10 and the driven device (shaft) 13 because the hub 12 is non-rotatably coupled to the shaft 13 by gear teeth 14 and the hub 12 is non-rotatably coupled to the runner 10 by rivets. Applicants further state that, in their present invention, when the bypass clutch 118 is engaged, the springs do not transmit torque to the runner 113 because such torque is being transmitted to the driven device directly by parts 134 and 114 and a non-rotatable connection between the runner 113 and the housing 102 is established.

The Examiner disagrees. It appears that Applicants are relying on the structure and function of Figure 4 in their present invention. Applicants' disclosure does not indicate that the springs 119 do not transmit torque to the runner when the bypass clutch is engaged. Matter of fact, when the bypass clutch is engaged, the torque is transmitted from the engine to the housing 112, through the springs 119 via

Art Unit: 3502

connection 131, 144, to the runner 113 via L-shaped member 123 **which is welded to the runner**, and out through piston 134. Member 140 only "limits" the angular movement of runner 113, the runner is not completely rotatable with respect to member 140. In the Japanese Patent, when the bypass clutch is engaged the runner is also non-rotatably connected with the housing via hub 12 and rivet (not numbered). Therefore, both the Japanese Patent and Applicants' present invention allow for a 1:1 connection between the driving member and the driven member with a torque connection therebetween.

Applicants' further contend that when the bypass clutch in their present invention is disengaged the springs of the damper are capable of transmitting torque which is in clear contrast with the Japanese Patent.

The Examiner disagrees. The Japanese Patent clearly shows the runner "welded" to the spring carrier 26 and the spring 25 connected to the driven member via hub 21 which is connected to hub 12 which is connected to the driven shaft 13. Therefore, when the bypass clutch is disengaged, the spring is in the power flow path.

Applicants contend that the part 21 shown in the Japanese Patent cannot transmit torque because it merely a bearing member for supporting the piston 15 and an axial abutment for the hub 12.

Art Unit: 3502

The Examiner disagrees. The part 21 most certainly transmit torque. Part 21 must rotate with hub 12 in order for the oil flow paths 40 and 42 to maintain a connection.

Applicants' further contend that the Examiner's use of *In re Aller* has been superseded by numerous decisions which hold that, in the absence of art actually disclosing the features, the term "an obvious matter of design choice" is not proper because such statement is conclusory and not a reason.

First, Applicants are relying on a Board of Appeals decision. Such decisions are decided on a case-by-case bases and are not intended as precedence. Second, the Examiner did not make a rejection based on "an obvious matter of design choice." The rejection is based on a decision by the CAFC that such modifications, i.e., the spring gradient, can be determined by one having ordinary skill in the art. Such skill would only require experimentation that any one having ordinary skill in the art could/would undertake to discover the optimum or workable ranges.

Therefor, absent a verified English translation of the Japanese Patent which clearly contradicts the Examiner's position, Applicant has failed to convince the Examiner of the function of the Japanese Patent as described in Applicants' arguments.

Serial Number: 08/135,059

-10-

Art Unit: 3502

Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL.** See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrea L. Pitts whose telephone number is (703) 308-2159.



Andrea L. Pitts
Primary Examiner
Art Unit 3502

ALP
July 7, 1996